

anodes are coated, thereby emitting light. Because the work function of a metal or a semiconductor material used for the microtips of a conventional FED is large, the gate voltage for electron emission must be very high. Residual gas particles in vacuum collide with electrons and are thus ionized. Because the microtips are bombarded with these gas ions, the microtips as an electron emission source may break. Moreover, since particles are separated from the phosphors colliding with electrons and pollute the microtips, the performance of the electron emission source may be deteriorated. These problems may reduce the performance and life of the FEA. To overcome these problems, instead of a metal or a semiconductor material, carbon nanotubes having a low electron emission voltage and an excellent chemical stability is used for microtips. In this case, the performance and life of the FEA can be improved.

IN THE CLAIMS:

Kindly add new claims 3 and 4 as follows:

3. (New) A triode field emission display (FED) using carbon nanotubes, comprising:
front and rear substrates disposed to face each other and separated by a predetermined distance;
a cathode formed on the rear substrate;
electron emitters formed on the cathode;
an anode formed on the front substrate;
phosphor formed on the anode; and

an extraction electrode formed on the front substrate on which the anode is formed, the extraction electrode being separated from the anode by a predetermined distance.

4. (New) A triode field emission display (FED) using carbon nanotubes, comprising:

front and rear substrates disposed to face each other and separated by a predetermined distance;

cathode lines formed on the rear substrate in a striped pattern;

electron emitters formed on the cathode lines at regular intervals;

anode lines formed on the front substrate in a striped pattern crossing the cathode lines;

phosphor formed on the anode lines; and

extraction electrodes formed on the front substrate on which the anodes are formed, each extraction electrode being separated from each adjacent anode by a predetermined distance, the extraction electrodes being formed in a striped pattern parallel to the anode lines.

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